REMARKS

Claims 1-17 are pending in the application. Claims 18-23 have been withdrawn from consideration. In the Office Action mailed May 18, 2006 the Examiner took the following action: (1) rejected claims 1-13 and 16-17 under 35 U.S.C. §102(b) as being anticipated by Osder (U.S. 5,678,786); (2) rejected claims 14-15 under 35 U.S.C. §103(a) as being unpatentable over Osder in view of Board (6,351,713). Applicants respectfully request reconsideration and withdrawal of the rejections in view of the following remarks.

I. Rejections under 35 U.S.C. §102(b)

Osder (U.S. 5,678,786)

Osder teaches the detection of swashplate actuator failures and the lock and measurement of the swashplates once the failure is detected. (3:30-33). The inputted commanded swashplate collective position, commanded swashplate x-axis rotational position, and commanded swashplate y-axis rotational position are then passed to a failure-mode control matrix. (4:8-24). The failure-mode control matrix computes swashplate actuator commanded position for the two operable swashplate actuators so that aircraft attitude control is maintained. (4:20-51).

Claims 1-13 and 16-17

Claims 1-13 and 16-17 are rejected under 35 U.S.C. §102(b) as being anticipated by Osder. Claims 2-13 and 16-17 depend from claim 1. Claim 1 recites a method of operating a product, comprising: monitoring a first diagnostic information of a component of the product; monitoring a second diagnostic information of a system of the product, the system including the component; combining the first diagnostic information of the component and the second diagnostic information of the system; and based at least partially on the combined first and second diagnostic information, reconfiguring at least one of the component and the system.

Applicants respectfully traverse the rejections, and submit the claims are allowable over Osder for the reasons explained in detail below.

First, applicants respectfully submit that the cited reference to Osder does not teach a method of operating a product, as recited in claim 1, comprising, "monitoring a second diagnostic information of a *system* of the product, *the system including the component*." Osder only teaches a helicopter control system that monitors a first swashplate actuator component, a second swashplate actuator component, and a third swashplate actuator component. (3:21-25). Osder does not specifically teach that there is a *system* associated with and including any of the first, second, and third actuator components. As a result, Osder cannot teach the monitoring of any *system* that encompasses any of the first, second and third actuator components. In other words, there is no teaching in Osder concerning the monitoring of diagnostic information of "a *system* of the product, the *system including the component*," as recited in claim 1.

Second, applicants respectfully submit that the cited reference to Osder does not teach a method of operating a product, as recited in claim 1, comprising, "combining the first diagnostic information of the component and the *second diagnostic information of the system*." (emphasis added). As discussed above, Osder does not teach the monitoring of any *system* that encompasses the first, second and third actuator components. Thus, Osder cannot possibly teach obtaining "the second diagnostic information of the system." As a result, Osder also cannot teach the combination of this "second diagnostic information of the system" with the "first diagnostic information of the component," as recited in claim 1.

Third, applicants respectfully submit that the cited reference to Osder does not teach a method of operating a product, as recited in claim 1, comprising, "based at least partially on the combined first and *second diagnostic information*, reconfiguring at least one component of the system." (emphasis added). As recited in claim 1, the second diagnostic information is that of a system that includes a component. In contrast, Osder merely teaches the reconfiguration of remaining swashplate actuator components based solely on the information that one of the

swashplate actuator components had failed. (4:8-10; 4:20-51). Therefore, Osder cannot teach the reconfiguration at least one component "based at least partially on the combined first and second diagnostic information," as recited in claim 1, wherein the second diagnostic information is that of a *system*.

Accordingly, applicants respectfully submit that the cited reference to Osder does not teach the method recited in claim 1. Thus, claim 1 is allowable over Osder. Furthermore, because claims 2-13 and 16-17 depend from claim 1, they are also allowable for at least the same reason that claim 1 is allowable, as well as for additional limitations recited in each claims.

In particular, claim 6 is further allowable over the cited reference to Osder. Specifically, Osder does not teach a method of operating a product, "wherein monitoring a second diagnostic information of a *system* includes monitoring a health indication of the system." (emphasis added). As discussed above, Osder only teaches the monitoring of first, second and third swashplate actuator components, but does not specifically teach a system encompassing any of these components or monitoring such a system. (4:8-10). As a result, Osder cannot possibly teach "monitoring a second diagnostic information of a system includes monitoring a health indication of the system," as recited in claim 6. Thus, claim 6 is further allowable over Osder.

Likewise, claims 7-9 are further allowable over the cited reference to Osder. Applicants respectfully reassert that Osder only teaches the monitoring of first, second and third swashplate actuator components, but does not specifically teach a system encompassing any of these components or monitoring such a system. (4:8-10). As a result, Osder cannot possibly teach monitoring a second *diagnostic information of a system* that includes, "monitoring a capability indication of the system," "monitoring reliability indication of the system," and "monitoring a second diagnostic information of a flight control system," as recited in claims 7, 8, and 9, respectively. Thus, claims 7-9 are also further allowable over Osder.

Moreover, claims 12-13 are also further allowable over the cited reference to Osder. With respect to claim 12, Osder does not teach a method of operating a product that comprises

"inputting the combined first and second diagnostic information into a maintenance support block." As discussed above, the second diagnostic information, as recited in claim 12, is that of a system that includes the component. In contrast, Osder only teaches the monitoring of first, second and third swashplate actuator components, but does not teach a system encompassing any of these components or monitoring such a system to obtain diagnostic information. (4:8-10). Consequently, it follows that Osder cannot teach "inputting the combined first and second diagnostic information into a maintenance support block." Similarly, for at least the same reason as asserted in claim 12, Osder cannot further teach the method of operating a product as recited in claim 13, "wherein inputting the combined first and second diagnostic information into a maintenance support block includes inputting the combined first and second diagnostic information into the maintenance support block to at least one of enable post-flight analysis and interpretation, and assist in assessing the prognosis of the component and system." Thus, claims 12-13 are further allowable over Osder.

Finally, claims 16-17 are further allowable over the cited reference to Osder as well. Specifically, Osder does not teach a method of operating a product, "wherein reconfiguring at least one of the component and the system includes reconfiguring at least one of the component and the system using an *integrated vehicle health management system*." (emphasis added). Instead, Osder merely teaches that the swashplate collective position controller 89 is capable of reconfiguring the remaining swashplate actuator components when failure of one of the swashplate actuator components occurs, but lacks teachings as to any other instances where reconfiguration by the controller can occur. (10:34-49).

Likewise, Osder also does not teach a method of operating a product, as recited in claim 17, "further comprising integrating an integrated vehicle health management system with reconfigurable control, and *performing tests of at least one of the component and the system during actual operation of the product*." (emphasis added). Osder merely teaches that in the event of an actuator component failure, one of the failure control matrix computing means 47,

48, and 67 detects the failure and generate outputs that are forwarded by the failure-mode receiving means 79 to the swashplate actuator interface 87 and the swashplate collective position controller 89. (9:57-63; 10:34-49). Osder does not teach that each of its failure control matrix computing means 47, 48 and 68, the failure-mode receiving means 79, the swashplate actuator interface 87, and the swashplate collective position controller 89 is capable of "performing tests of at least one of the component and the system." Thus, claims 16-17 are further allowable over Osder.

II. Rejections under 35 U.S.C. §103(a)

Board (U.S. 6,351,713)

Board teaches a distributed stress wave analysis system for detecting structure borne sounds caused by friction. (2:40-42). The detected information is processed using feature extraction and neural network artificial intelligence software. (2:42-44). The system consists of stress wave sensors, interconnect cables, and preferably three modules: (1) distributed processing units, (2) maintenance advisory panel, and (3) laptop computer. (2:44-47).

Claims 14-15

Claims 14-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Osder in view of Board. Claims 14-15 depend from claim 1. Claim 1 recites a method of operating a product, comprising: monitoring a first diagnostic information of a component of the product; monitoring a second diagnostic information of a system of the product, the system including the component; combining the first diagnostic information of the component and the second diagnostic information of the system; and based at least partially on the combined first and second diagnostic information, reconfiguring at least one of the component and the system.

Applicants respectfully submit that each of the cited references to Osder and Board, either individually or in combination, fails to disclose, teach, or fairly suggest the method recited

in claim 1. First, applicants respectfully incorporate the argument presented in response to the rejection of claim 1 under 35 U.S.C. §102(b), and reassert that Osder does not teach the method of operating a product as recited in claim 1.

Moreover, the deficiencies of Osder are not remedied by the teachings of Board. Board merely teaches a system for detecting structure borne caused by friction, wherein the system includes an adjustable data fusion architecture to optimize indication thresholds, maximize fault detection probability, and minimize false alarms. (3:1-3). However, Board does not teach "monitoring a second diagnostic information of a *system* of a product, the *system including the component*," as recited in claim 1.

Accordingly, applicants respectfully submit each of the cited references to Osder and Board, whether individually or in combination, does not disclose, teach or fairly suggest the method recited in claim 1. Thus, claim 1 is allowable over the cited references. Furthermore, since claims 14-15 depend from claim 1, they are also allowable over the cited references for at least the same reason claim 1 is allowable, as well as for additional limitations recited in those claims.

CONCLUSION

Applicants respectfully submit that pending claims 1-17 are now in condition for allowance. If the Examiner has any questions, the Examiner is invited to contact the applicants' attorney at the telephone number listed below.

Respectfully Submitted,

Dated: Sept. 18, 2006 By: Dale C. Barr

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